

# RE-ENGINEERING KPI DASHBOARD PIPELINE

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# OVERVIEW

*This is an **excerpt of a presentation** I put together for my team on a back-end data pipeline that I **re-engineered**. Previously there had not been any documentation on the pipeline. I highlighted **2 key sections below**.*

*Some of the specifics have been hidden for privacy reasons. “KPI” is being used to mask the specific performance indicator.*

Problems with the Dashboards

Performance Improvement

Issues Deciphering the Problems

Old Data Pipeline Diagrams

New Data Pipeline Diagrams

# RUNNING LIST OF PROBLEMS TO RESOLVE

## ORIGINAL PROBLEMS

- monthly KPI counts don't match data
- monthly admit counts don't match finance report
- counts don't match for same
- measure across graphs
- performance / timing
- adding raw numbers to final data set

## ISSUES ENCOUNTERED

- types of joins (inner, left, right, full)
- left and right join tables
- bloated queries
- circular and repetitive queries
- missing values
- aggregating monthly UTC time
- what is an inpatient admit?
- joining tables on codes vs. display
- coding of other and unknown values
- reference data tables inaccurate

# PERFORMANCE IMPROVEMENT

	OLD PIPELINES	NEW PIPELINES	PERCENT CHANGE
ENTIRE FACILITY			
1	3.15 min – 18.91 min	20 sec – 48 sec	-
2	43 sec – 4.68 min	-	-
FLOORS			
1	7.75 min – 56.43 min	51 sec – 2.25 min	-
2	7.84 min – 56.43 min	-	-
3	12.53 min – 47.62 min	-	-
TOTAL	31.99 min – 184.07 min	1.18 min – 3.05 min	96.31% - 98.34% decrease in time  ~ 1.85% of the original time

# ISSUES DECIPHERING THE PROBLEMS



NO  
DOCUMENTATION



- TAKING VERY  
LONG TIME TO  
RUN THE CODE



- COMPLEX  
STRUCTURE

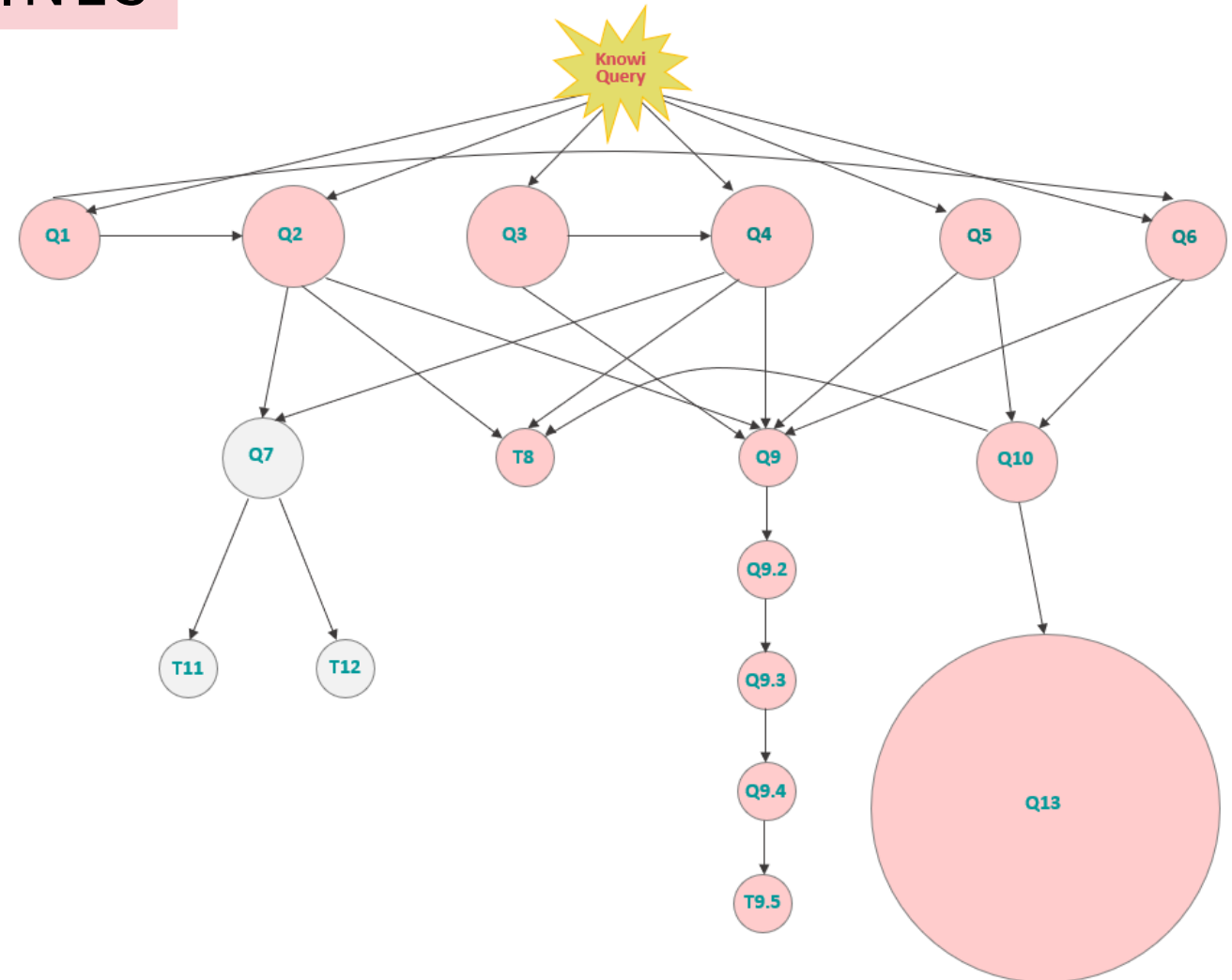


- LENGTHY CODE

# ENTIRE FACILITY

## 1 OF 2 OLD DATA PIPELINES

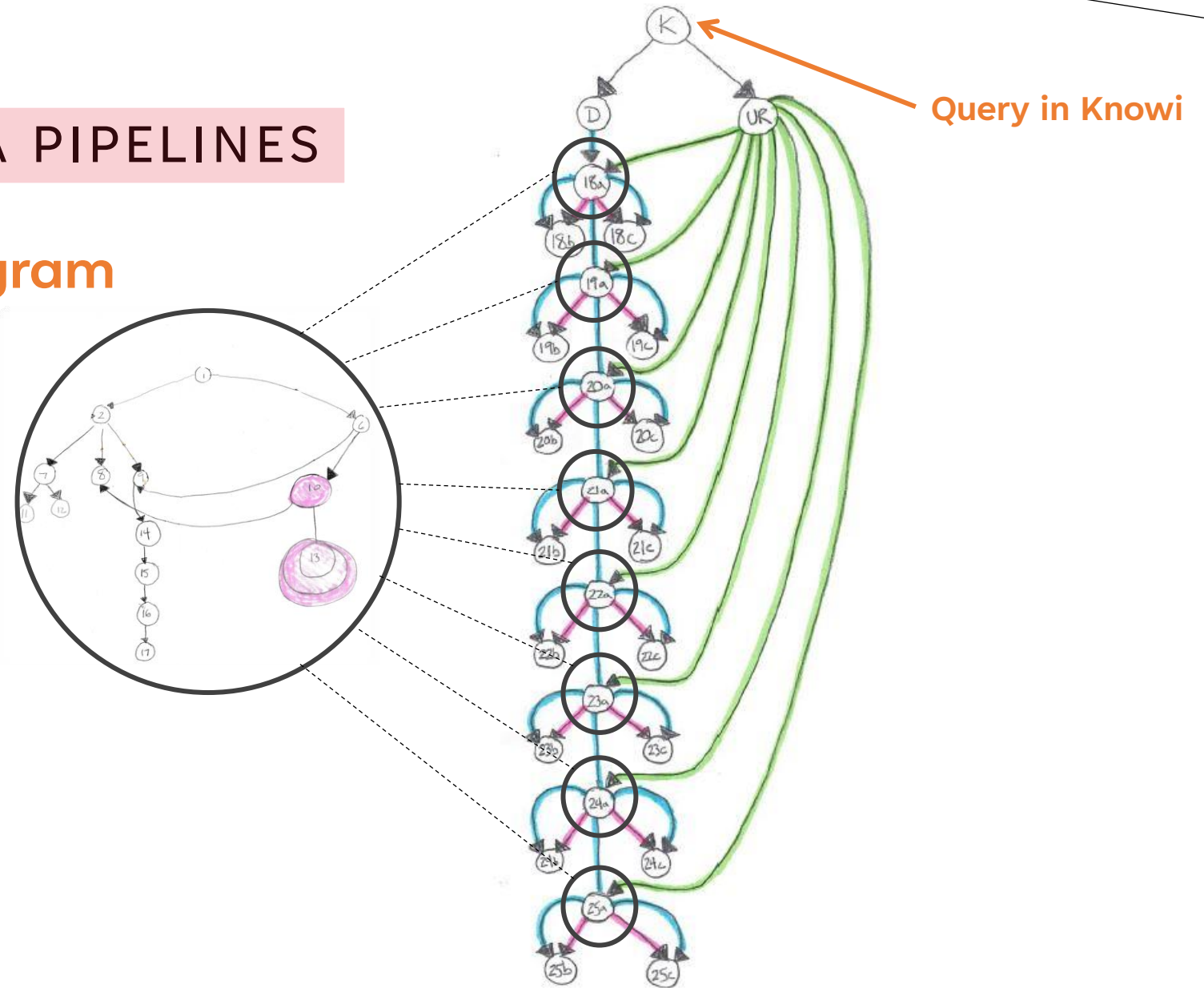
### Data Pipeline Diagram



# FLOORS

1 OF 3 OLD DATA PIPELINES

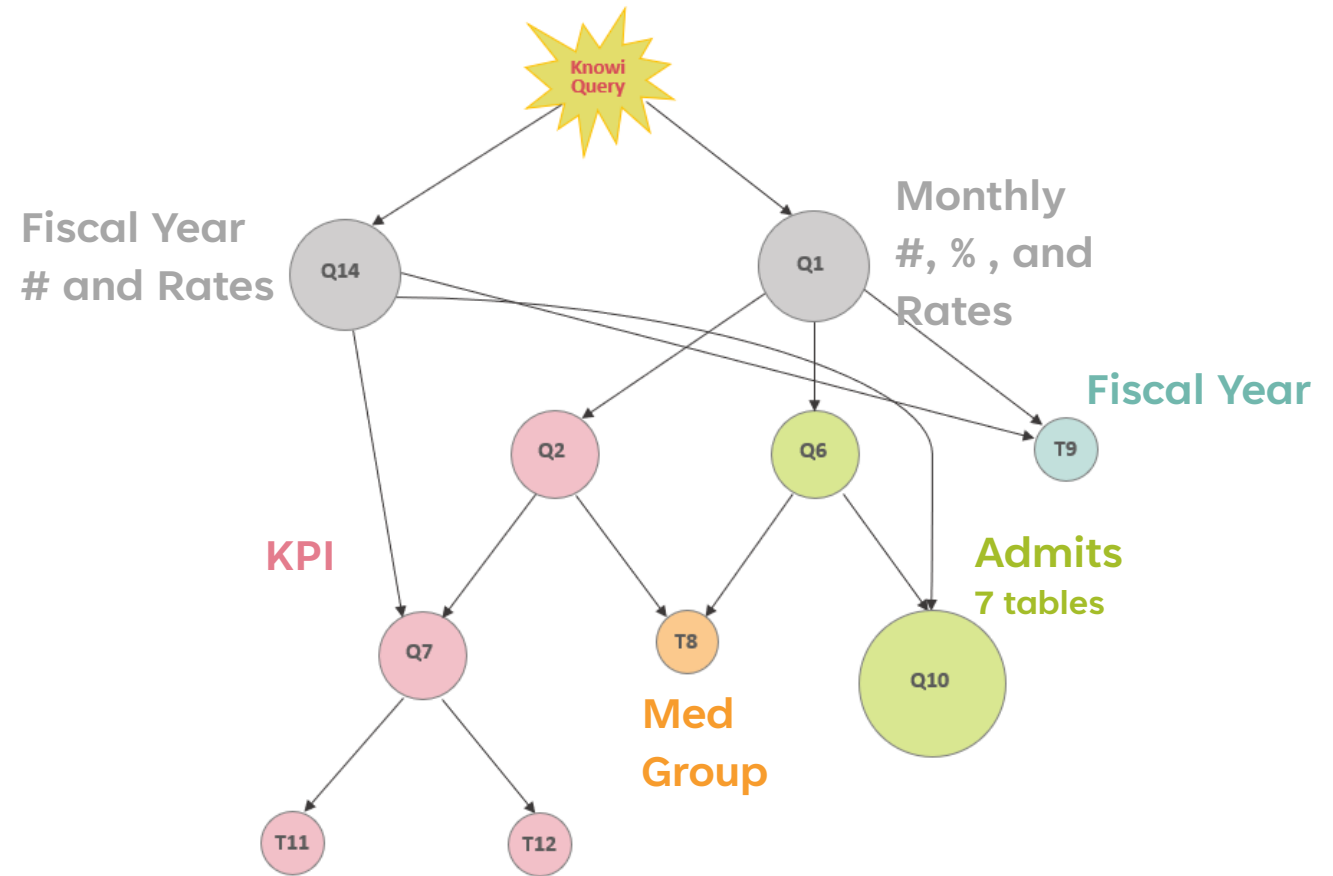
## Data Pipeline Diagram



# ENTIRE FACILITY

## NEW PIPELINE

Replaces 2 Pipelines





# FLOORS

## NEW PIPELINE

Replaces 3 Pipelines

